



# NASA Education Design Team

Presentation to the NASA Advisory Council  
Education and Public Outreach Committee

Leland Melvin and Trish Pengra  
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# NASA Education Design Team

Team Chartered by Administrator Bolden to

- develop a strategy to improve NASA's education offerings, and
- to assist the Agency in establishing goals, structures, processes and evaluative techniques to implement a sustainable and innovative STEM Education program.

Six month effort with initial recommendations due to Administrator in time to influence the FY2012 Agency budget, final recommendations in October 2010



# NASA Education Design Team

Team made up of NASA Civil Service Employees with Education Expertise in the Following Competencies:

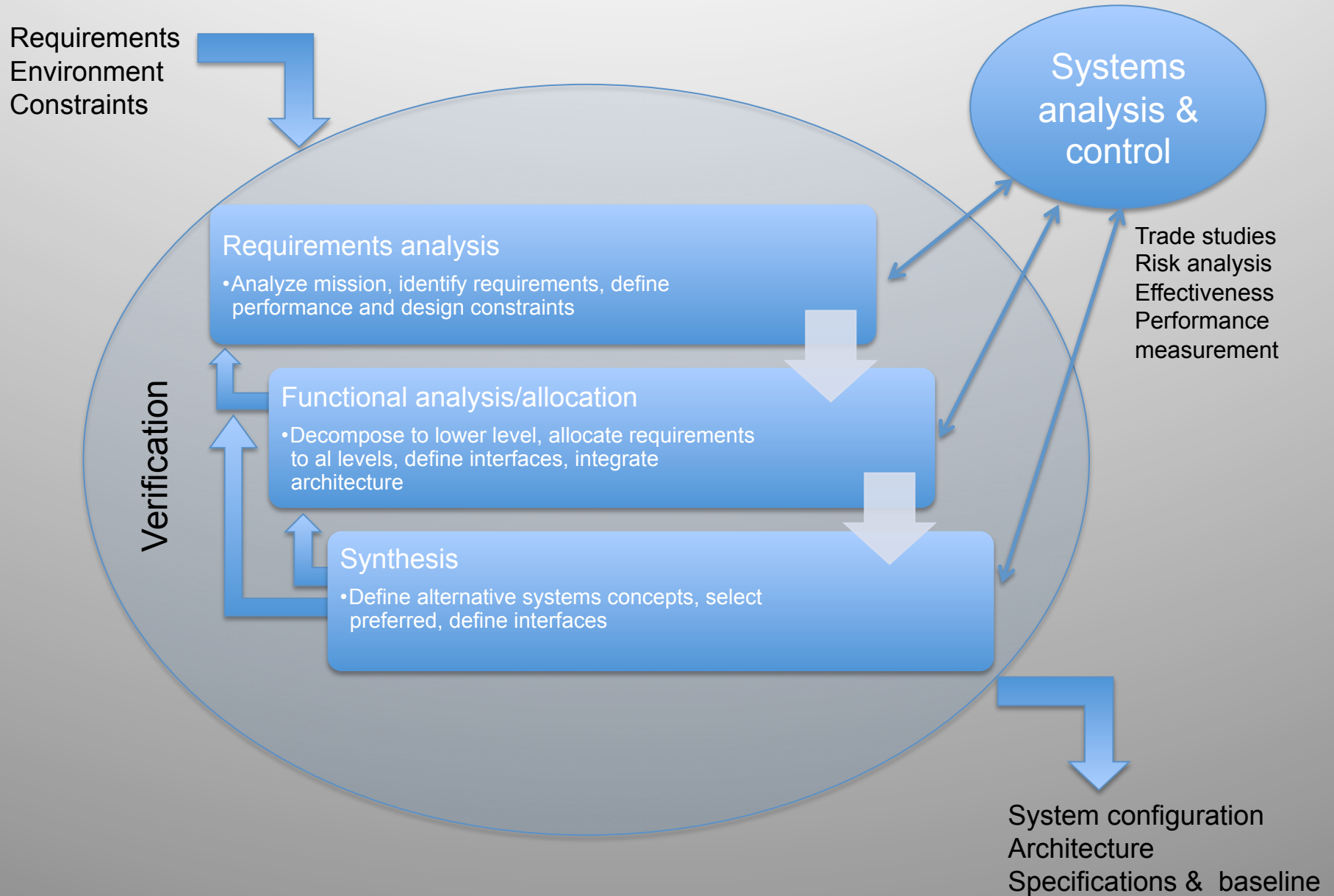
- K-12 Programs
- Higher Education Programs
- Informal Education Programs
- Outreach Programs
- Partnerships with External Organizations
- Classroom Teaching Experience
- Program Evaluation, Metrics, and Research Experience
- Systems Engineering Experience
- Program Development and Implementation Experience



# Team Members

- Leland Melvin, Co-Lead
- Trish Pengra, Co-Lead
- Bill Anderson, HQ Legislative Affairs
- Gregg Buckingham, KSC Education Manager
- Nicole Campbell, White House Fellow
- Carmel Conaty, GSFC Sys Planning & Analysis Manager
- Lisa Guerra, HQ ESMD (on detail to UT to develop systems engineering undergrad curriculum)
- Rob LaSalvia, NASA Explorer School Project Manager
- Dean Kern, NASA Goddard Education Program Manager
- Lori Manthey, IPCE/GRC Executive Officer
- Bonita Soley, HQ Office of Diversity and EO
- Stephanie Stockman, SMD Physical Scientist/education lead

# Systems Engineering Approach



# NASA Systems Approach to Education

Administration policy  
National Aeronautics  
and Space Act, 1958  
Dept. of Education  
NRC "Rising Above  
the Gathering Storm"  
Congressional  
Direction

Verification

## Current NASA Education Programs

- Analyze mission, identify requirements, define performance and design constraints

## Individual Education Projects

- Decompose to lower level projects, define interfaces, integrate system

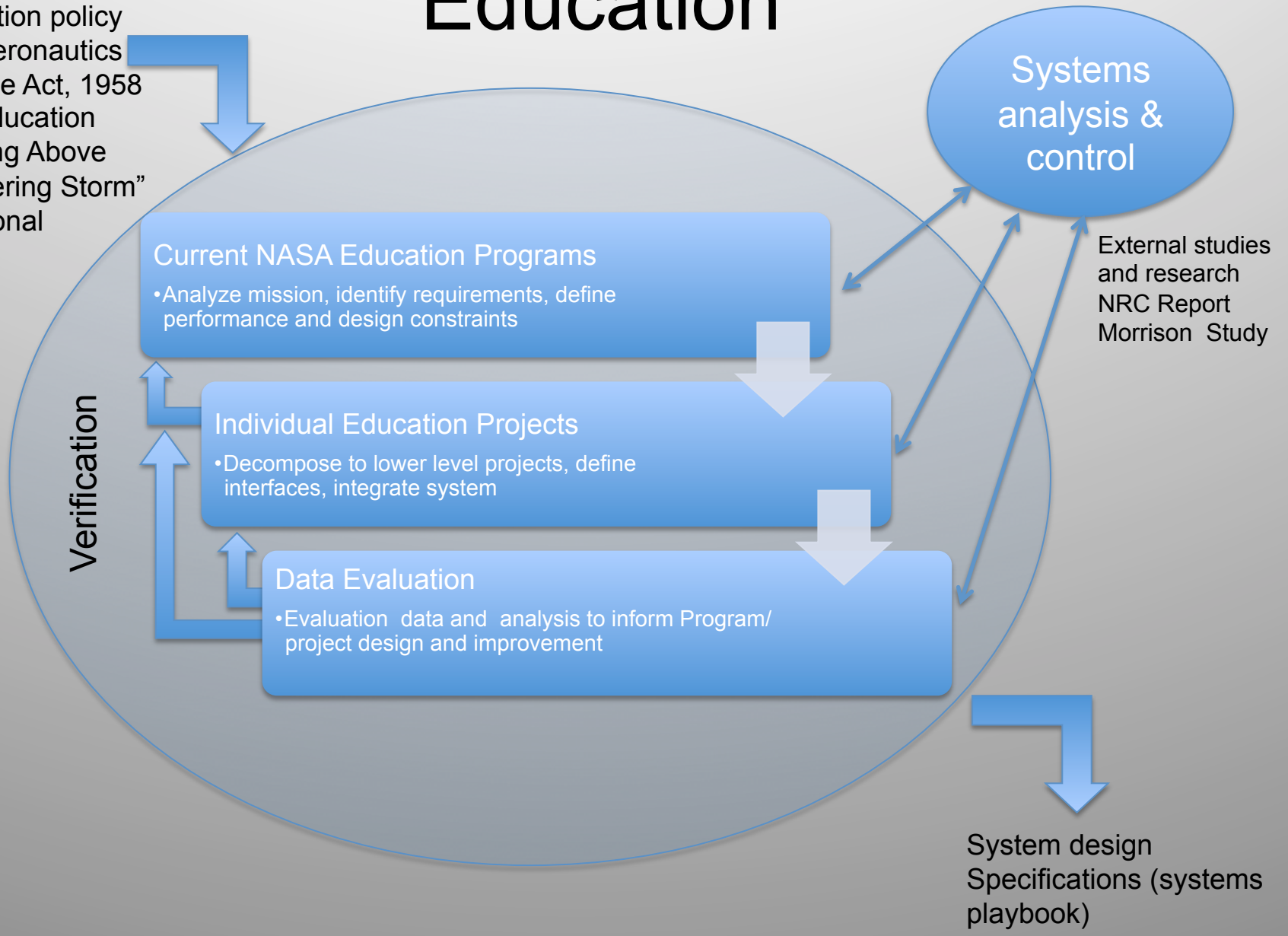
## Data Evaluation

- Evaluation data and analysis to inform Program/ project design and improvement

Systems  
analysis &  
control

External studies  
and research  
NRC Report  
Morrison Study

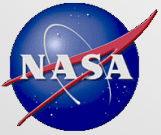
System design  
Specifications (systems  
playbook)





# Timeline

May	Team chartered
May-July	Understand current program
July-August	Define optimal program, gap analysis
Mid-August	Preliminary findings/budget
Mid-October	Final product to Administrator



# We want to hear from you...

- How do you view NASA's role in STEM education?
- Should NASA use the media (television, film, video games) to build interest in STEM disciplines? How?
- Should NASA harness the power of Web 2.0 and social media to inspire students? How?
- How can NASA partner more effectively to increase program impact?
- How can NASA help STEM educators capture and maintain student interest in STEM?
- What are the Critical Success Factors for STEM education programs?